

Report Date:  
03-May-17 11:43**Laboratory Report**  
**SC33894**Gulf Oil L.P.  
281 Eastern Avenue  
Chelsea, MA 02150  
Attn: Andrew P. AdamsProject: Gulf Terminal - Chelsea, MA  
Project #: Gulf Chelsea

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.  
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110  
Connecticut # PH-0777  
Florida # E87936  
Maine # MA138  
New Hampshire # 2972/2538  
New Jersey # MA011  
New York # 11393  
Pennsylvania # 68-04426/68-02924  
Rhode Island # LAO00348  
USDA # P330-15-00375  
Vermont # VT-11393Authorized by:  
Christina White  
Laboratory Director

A handwritten signature in black ink that reads "Christina A. White".

Eurofins Spectrum Analytical holds primary certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 8 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

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*Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.*

Sample Summary

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC33894-01	Outfall 003	Surface Water	22-Apr-17 19:00	25-Apr-17 17:05

**CASE NARRATIVE:**

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 2.4 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

**There is no relevant protocol-specific QC and/or performance standards non-conformances to report.**

## Sample Acceptance Check Form

Client: Gulf Oil L.P.  
Project: Gulf Terminal - Chelsea, MA / Gulf Chelsea  
Work Order: SC33894  
Sample(s) received on: 4/25/2017

*The following outlines the condition of samples for the attached Chain of Custody upon receipt.*

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Were custody seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples refrigerated upon transfer to laboratory representative?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were sample containers received intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples accompanied by a Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did sample container labels agree with Chain of Custody document?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were samples received within method-specific holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Summary of Hits

Lab ID: SC33894-01

Client ID: Outfall 003

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Total Suspended Solids	11.0		0.5	mg/l	SM2540D (11)

*Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.*

Sample Identification

Outfall 003	Client Project #	Matrix	Collection Date/Time	Received
SC33894-01	Gulf Chelsea	Surface Water	22-Apr-17 19:00	25-Apr-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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General Chemistry Parameters

Total Suspended Solids	11.0			mg/l	0.5	0.2	1	SM2540D (11)	27-Apr-17	02-May-17	CMB	1707049	X
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## General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b><u>SM2540D (11)</u></b>										
<b>Batch 1707049 - General Preparation</b>										
<b><u>Blank (1707049-BLK1)</u></b>					<u>Prepared: 27-Apr-17   Analyzed: 02-May-17</u>					
Total Suspended Solids	< 0.5		mg/l	0.5						
<b><u>LCS (1707049-BS1)</u></b>					<u>Prepared: 27-Apr-17   Analyzed: 02-May-17</u>					
Total Suspended Solids	<b>98.0</b>		mg/l	10.0	100		98	90-110		

## Notes and Definitions

dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.



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# CHAIN OF CUSTODY RECORD

## Special Handling:

- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: \_\_\_\_\_
- All TATs subject to laboratory approval
- Min. 24-hr notification needed for rushes
- Samples disposed after 60 days unless otherwise instructed.

Page 1 of 1

Report To: Andrew Adams

Gulf Oil LP

281 Eastern Ave

Chelsea, MA 02150

Telephone #: 617.884.5980

Project Mgr: Andrew Adams

Invoice To: Christopher Gill

Gulf Oil LP

80 William St, Suite 400

Wellesley, MA 02481-3705

P.O. No.:

Quote/RON:

Project No:

Site Name:

Location:

Sample(s):

Gulf Chelsea

Gulf Chelsea Terminal

281 Eastern Ave, Chelsea

Andrew Adams

State: MA

R=Field Filtered 1=Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 2=HCl 3=H<sub>2</sub>SO<sub>4</sub> 4=HNO<sub>3</sub> 5=NaOH 6=Ascorbic Acid  
7=CH<sub>3</sub>OH 8=NaHSO<sub>4</sub> 9=Deionized Water 10=H<sub>3</sub>PO<sub>4</sub> 11= none 12=

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water

O=Oil SO=Soil SI=Sludge A=Indoor/Ambient Air SG=Soil Gas

X1= X2= X3=

G=Grab

C=Composite

Lab ID: Sample ID: Date: Time: Type

33894-01 Outfall 003 4-22-11 14:00 G

Matrix

# of VOA Vials  
# of Amber Glass  
# of Clear Glass  
# of Plastic

TSS

Check if chlorinated

MA DEP MCP CAM Report? ☐ Yes ☒ No  
CT DRP RCP Report? ☐ Yes ☒ No  
Standard ☒ DQA\* ☐ No QC  
ASP A\* ☐ ASP B\* ☐ ASP C\*  
NJ Reduced\* ☐ NJ Full\*  
Tier II\* ☐ Tier IV\*  
Other: \_\_\_\_\_  
State-specific reporting standards: \_\_\_\_\_

List Preservative Code below:

Analysis

Relinquished by:

Signature

Received by:

Signature

Date:

4-25-12 13:25

Time:

Temp °C

24

Condition upon receipt

Condition upon receipt

Condition upon receipt

E-mail to: aadams@gulfoil.com, cgill@gulfoil.com

Condition upon receipt

Condition upon receipt

Condition upon receipt

Condition upon receipt

Condition upon receipt

SC 33894-01

## Batch Summary

**1707049**

*General Chemistry Parameters*

1707049-BLK1

1707049-BS1

SC33894-01 (Outfall 003)